UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,462	09/29/2006	Gheorghe Sorin Stan	2004P00687WOUS	9390

24737 7590 11/01/2011

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
ORTIZ CRIADO, JORGE L	
ART UNIT	**PAPER NUMBER**
2627	

NOTIFICATION DATE	DELIVERY MODE
11/01/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

vera.kublanov@philips.com
debbie.henn@philips.com
marianne.fox@philips.com

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/599,462
Filing Date: September 29, 2006
Appellant(s): STAN, GHEORGHE SORIN

Gregory L. Thorne
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 07/15/2011 appealing from the Office action mailed 02/16/2011.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-3 and 5-21 are pending in this application. All pending claims are rejected in the Final Office Action that issued February 16, 2011.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN

REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

EP1154412A1	Kono	11-2001
JP2004079103	Harada et al.	03-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 11-13 and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kono EP 1154412.

As per claim 1, Kono discloses a method of preventing damage when writing information in a storage layer of a multi-layer optical storage medium, comprising acts of:

monitoring a plurality of distinct signals (at very least focus error; focus intensity, tracking signals etc. are monitored) while focusing a write light beam in a focal spot at a target storage layer, an error on the two distinct input signals (focus error monitored signal and light intensity) indicating an axial focus spot displacement (See [0038] and at col. 9 lines 11-15);

inhibiting the writing process in case of an axial focus spot displacement (as performed by focus monitor 16; [0026]; [0033]; in Fig. 2; Fig. 5 Fig. 6.

As per claim 2, is rejected for the same reasons of anticipation outlined above, Kono further discloses such medium access device (Fig. 2).

As per claim 3, Kono further discloses comprising a driver circuit (4) for driving the light beam generating means in accordance with a data signal representing data to be written, the driver circuit having a control input; wherein the write inhibit means (16) have an output coupled to said control input of the driver circuit, the write inhibit means being designed to generate a command signal for the driver circuit such as to effectively inhibit the driver circuit in case of an axial focus spot displacement event (see Fig. 2).

As per claim 5, Kono further discloses comprising, the a inhibit circuit (16) has at least three different inputs (at very least focus error; focus intensity, tracking signals etc. are monitored) capable of indicating axial focus displacement; the write inhibit circuit being designed to monitor at least two (focus error; focus intensity) of its input signals and to inhibit

the writing process if at least two of the input signals are indicative of the occurrence of an axial focus spot displacement (See at col. 9 lines 11-15).

As per claim 6, Kono further discloses comprising having at least two inputs for receiving at least one input signal capable of indicating an axial focus displacement; the write inhibit means being designed to monitor an input signal, to calculate an axial focus displacement (Q) from the input signal, and to decide that the input signal is indicative of an axial focus spot displacement if the calculated axial focus displacement exceeds a predetermined displacement threshold (Fig. 5, Fig. 6Th).

As per claim 7, Kono further discloses the write inhibit circuit has at least two inputs for receiving at least two input signals capable of indicating an axial focus displacement; the write inhibit means circuit designed to monitor an input signal, to monitor for the possible occurrence of a predefined characteristic (S signal) feature of the input signal, and to decide that the input signal is indicative of an axial focus spot displacement if such characteristic feature occurs (See Figure 5).

As per claim 11, for the same reasons of obviousness as outline above, Kono teachings further comprising at least one optical detector (7) for receiving light reflected from the storage medium; the write inhibit means (16) being designed to monitor at least one signal derived from at least one detector output signal (see Fig. 2).

As per claim 12, for the same reasons of obviousness as outline above, Kono teachings the write inhibit means (16) being designed to monitor at least one of a signal corresponding to the reflected central aperture signal obtained from a forward-sense diode of the sensor, or to monitor at least a signal corresponding to the focal error signal (S), or to monitor at least a signal corresponding to the focal error signal integrated with a predetermined time constant (see Figs. 5, 6).

As per claim 13, Kono discloses at least one of DVD-discs or BD discs [0002].

As per claims 20 and 21, Kono discloses at very least two of the displacement error signals.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. JP 2004-079103.

Harada et al. discloses (See Abstract; FIGS. 1-2) a medium access device for preventing damage when writing information in a storage layer of a multi-layer optical storage medium, the medium access device comprising: a light beam generator (laser diode not shown; [0012]) for generating a write light beam; a write inhibit circuit (44; 46; 28; CPU; Fig. 2) monitor plurality where at least two distinct input signal while focusing the write beam in a focal spot at a target storage layer to detect an axial focus spot displacement (acceleration), and a writing process in case of the axial focus displacement event (acceleration detection), an error on the input signals indicates the axial focus spot displacement, wherein the write inhibit circuit monitors the at least two input signals are "capable of" indicating an axial focus spot displacement,

determining a speed with which said at least one input signal changes in time (defined by acceleration), and deciding that the input signal indicates that an axial focus displacement event is about to occur on the basis of an evaluation of such changes.

Harada et al. discloses [0019] detecting for axial or radial displacement (e.g. focus; tracking) detected inputs to the write inhibit circuit; monitor at least two of its inputs signals to detect such displacement.

Although Harada et al. does not expressly disclose to decide that spot displacement when an error on the two of the input signals are indicating, but from the above teachings, it would have been obvious to one of an ordinary skill in the art at the time of the invention to decide from the two or more inputted signals taught by Harada et al. and monitor and decides based on both and/or all signals inputted as desired, providing integration, robustness, reliability and accuracy by confirming and redundantly affirming the errors, the access device can reliably decides of inhibition of writing.

As per in claim 15, Harada et al. discloses the write inhibit circuit is designed to inhibit the writing process if a time-derivative (defined as acceleration, which is a time derivative) of said at least one input signal predicts an axial focus displacement event (see Fig. 2; Abstract).

As per claim 16, Harada et al. discloses wherein a time-derivative particularly of a higher than a first order time derivative, because it is clearly understood since that acceleration is defined as the **second order** derivative displacement of a moving object; in this case objective lens thru focusing.

The first order derivative corresponds to merely the velocity displacement of a moving object, which one of as ordinary skill in the art would have found obvious that such analogous interrelationship for time derivative were at the time of the invention known.

It is notoriously well known that if x were the position of an object and t the time, then the first derivative is the velocity, the second the acceleration, and this would describe the motion of the object. Hence, the mere selection of the derivative to be used is a mere design choice and/or design equivalent analogous alternative at the time of the invention.

As per claim 17, Harada et al. discloses wherein the time-derivative is higher than a first order time derivative (it is clearly understood since that acceleration is defined as the **second order** derivative displacement of a moving object; in this case objective lens thru focusing).

Claims 18 and 19 are draw to the access device using the method of claims 14 and 15 above and rejected for the same reasons of obviousness.

(10) Response to Argument

With respect to claims 1-7, 11-13 and 20-21

Appellant argues that Kono is directed detecting disturbing of focus control due to disturbance, vibration, or physical defect of the disk and that is contrary to the clams, which set out "indicating axial focus displacement". Appellant argues that the Examiner has neglected to point exactly where in paragraph [0038] or elsewhere in Kono for that matter support for such assertion is found.

The examiner cannot concur with the Appellant. As previously indicated in the Final rejection, as the claimed invention Kono describes a method of preventing damage when writing information in a storage layer of a multi-layer optical storage medium, for example paragraph [0022] of Kono, as acknowledged by the Appellant, recites the optical disk device avoids wrong recording or wrong erasing of signals in a region of the disk during the recording operation. The Abstract of Kono, as other portions of Kono as well, find support for this matter, for example the Abstract it is also recited an optical disk device is capable of preventing a signal from being incorrectly recorded or erased on other data plane than a data plane in a recording operation on a disk having plural layers of data plane.

The method of Kono, as claimed, describes monitoring a plurality of distinct input signals while focusing a write light beam in a focal spot at a target storage layer. For instance paragraph [0022] describes that avoiding such wrong recording while focus control is performed. Subsequent paragraph [0023] describes when performing such recording operation in the data

plane, it monitors focus error signal and intensity of reflected light. Paragraph [0038], describes of the same signals mentioned in the previous paragraphs regarding the monitor of focus error signal and light reflected quantity.

Kono, as claimed, further describes an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement. For instance as found in Kono's Abstract, a focus monitor an increase of a focus error signal, a reflected light quantity monitor may monitor a drop of the reflected light quantity, the focus error signal increment or the light quantity being detected and monitored are indicators of axial focus spot displacement.

For example as in [0038], with respect to Fig. 5 shows a representation when focus error signal goes out of the first data plane S1 when disturbed by disturbance or vibrations. The focus error signal gradually increases as indicated by the pulse Q1 due to the axial movement of the focus in the data plane, where out of focus displacement is detected.

Also, as in [0038], with respect to Fig. 6, the light quantity/intensity represented in the Fig. shows the comparison of such reflected quantity with a predetermined reference th2, in result of disturbance or vibrations at the moment when the focus is out of the data plane indicated by the low level on the light intensity. The light quantity drop becomes smaller due to the axial movement of the focus in the data plane, where out of focus displacement is detected.

Kono, as claimed, further describes inhibiting the writing process in case of the axial focus spot displacement. Upon judging the above occurrence of the signals as monitored and detected, the device disk device issues a command of light intensity reducing signal to the light intensity controller. The controller immediately lowers the intensity of the light to the

reproducing level from the recording/writing level interrupting the recording/writing operation avoiding and inhibiting the recording/writing process wrongly to a different data plane.

Furthermore, Kono discloses in [0038], if a quick response is required, the servo failure had better be detected with focus error signal. Thus, the failure may be detected preferably with the focus error signal **and** the quantity of the reflected light.

It is very clear from the portion of Kono with respect to the portions cited, particularly paragraph [0038] and throughout the whole disclosure of Kono, that Kono describes and discloses **indicating axial focus displacement** as claimed, which set out "an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement". Appellant arguments are not found compelling.

Appellant argues that assuming, arguendo, that the focus error signal and the quantity of the reflected light are relied on together, it is the servo failure, which is a mechanical or motor failure that is being detected, not the axial focus spot displacement.

The examiner cannot concur with the Appellant, first because the examiner cannot find how the Appellant finds that mechanical or motor failures are detected in the portions of Kono, since Kono clearly describes that the focus error signal gradually increases as indicated by the pulse Q1 due to the axial movement of the focus in the data plane, where out of focus displacement is detected, and the light quantity drop becomes smaller due to the axial movement of the focus **in the data plane**, where out of focus displacement is detected.

Appellant argument is not found compelling.

Appellant argues Kono does not teach, disclose or suggest "an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement; and inhibiting the writing process in case of the axial focus spot displacement" as recited in claim 1, and as similarly recited in claim 2.

As noted above Kono, discloses monitoring **two** focus error signal and light reflected quantity. The error on the focus error signal and the light reflected quantity, the two, indicate axial focus spot displacement. The focus error signal gradually increases as indicated by the pulse Q1 due to the axial movement of the focus in the data plane, where out of focus displacement is detected. The light quantity drop becomes smaller due to the axial movement of the focus in the data plane, where out of focus displacement is detected.

Appellant arguments are not found compelling.

With respect to claims 14-19

Appellant argues Harada does not teach, disclose or suggest "an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement and inhibiting the writing process in case of the axial focus spot displacement.

The examiner cannot concur with the Appellant, since Harada as indicated in the Final office action with respect to Fig. 1 and 2 drawings, discloses an describes for instance clearly recited in the abstract, "when data is written to an optical disk 10, acceleration applied to **tracking servo means** 40 and 26 **and**/or **focus servo means** 42 and 28 **is detected**. When the detected acceleration exceeds preset reference acceleration, data writing is once stopped".

Harada, as indicated for example paragraph [0019], monitors and detects the input signals to the focus and tracking control, both which indicates the acceleration in the tracking direction and focus direction of the objective lens focusing the light beam on the recording layer during recording. The light beam being focused and accelerated in the tracking and/or focus direction indicate axial focus displacement with respect to the recording plane of more of a specified quantity.

Such acceleration, as known, correspond to the "determining a speed with which said at least two input signals change in time" claimed.

Harada, specifies that upon detection and judgment of that the acceleration in the tracking direction and/or focus direction to be more of such specified and quantity the data **writing is stopped**, inhibiting the writing process as claimed, as with regard to Fig. drawing 2, step 106, [0026].

The plurality of distinct input signals, for example (1) focus direction acceleration and (2) tracking direction acceleration of the focused light being focused by the objective lens 38, are being monitored and are configured for indicating an axial focus displacement, where both indicates displacement with respect with respect to the recording layer plane monitored to not exceed a specified quantity as previously indicated for example in [0019].

Harada clearly monitor two distinct input signals that indicate axial focus displacement about occur by detecting and monitoring two input signals of acceleration in focus and acceleration in tracking directions with respect to the focused signal by the objective lens 38 with respect to the data recording plane while the recording is performed.

It is understood that both signals could be indicating acceleration that causes the axial focus post displacement at the same time or might be the case although both are being monitored, maybe one of the signal from the two indicating the acceleration of more than the specified acceleration quantity that indicates axial displacement.

It would be understood that an acceleration being detected on both would have been the indication that an error is occurring on two the plurality of distinct input signals which indicates axial focus spot displacement, as the claim recites, since both signals indicates such displacement. Therefore, Harada does teach **two or more** signals that would have taught the ordinary skill in the art to have made the claimed elements obvious. Although Harada et al. does not expressly recites to decide that spot displacement when an error on the two of the input signals are indicating, but from the teachings, it would have been understood and/or obvious to one of an ordinary skill in the art at the time of the invention to decide from the two or more inputted signals and monitor and decides based on both and/or all signals inputted as desired, providing integration, robustness, reliability and accuracy by confirming and redundantly affirming the errors, the access device can reliably decides of inhibition of writing.

Appellant arguments are not found compelling.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,
/JORGE L ORTIZ CRIADO/
Primary Examiner, Art Unit 2627

Conferees:
/MOHAMMAD GHAYOUR/
Supervisory Patent Examiner, Art Unit 2627

/wy/
Wayne Young
Supervisory Patent Examiner, Art Unit 2627